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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,756	10/08/2003	Robert Bruce Miller	26015-194/P86	8282
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PETER K HAHN LUCE, FORWARD, HAMILTON, SCRIPPS, LLP. 600 WEST BROADWAY SUITE 2600 SAN DIEGO, CA 92101			THOMAS, COURTNEY D	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/681,756	MILLER, ROBERT BRUCE	
	Examiner	Art Unit	
	Courtney Thomas	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-7 and 9-53 have been considered but are moot in view of the new ground(s) of rejection.

### ***Information Disclosure Statement***

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the: a) (system and/or method) wherein movement of a pallet in a third direction (claims 44-53) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### *Claim Objections*

4. Claims 10, 12, 13, 16, 21 and 27 are objected to because of the following informalities:
5. Claim 10 recites the phrase "the center." Examiner notes there is no antecedent basis for the use of this term.
6. Claims 12 and 13 attempt to describe features of a pallet that are unclear. In particular, phrases such as: "a side defined by opposite extremities," and "the side between one extremity of the side" are ambiguous. Examiner suggests revisions for simplicity and clarity. Claims 16, 21, 27 are similar treated.
7. The claims have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the claims.
8. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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10. Claim 7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the claim as written fails to indicate what it is that the microprocessor determines. Is it a position of a source, such as irradiation direction? Does the microprocessor determine irradiation sequences to determine a return to a first state or the completion of a first state and the preparation for a second state? Additionally, it is unclear whether the phrase "plurality of cycles" references the microcomputer's processing sequences or the irradiation sequences of the claimed system.

### *Claim Rejections - 35 USC § 103*

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-7 and 9-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koenck et al. (U.S. Patent 6,931,095).

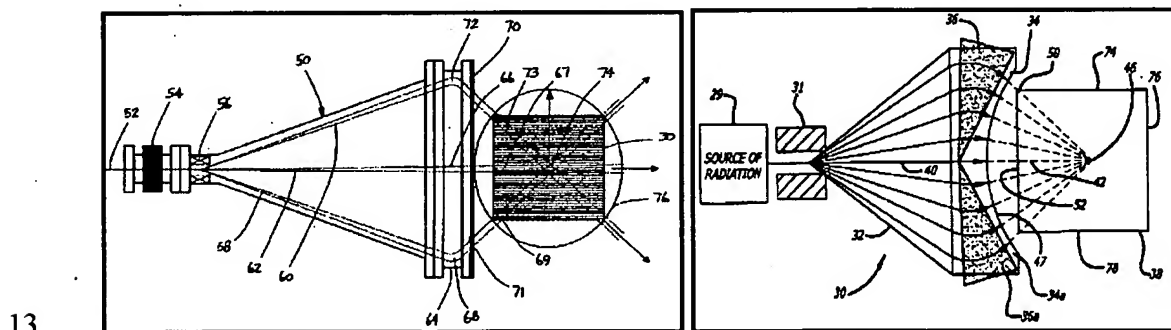
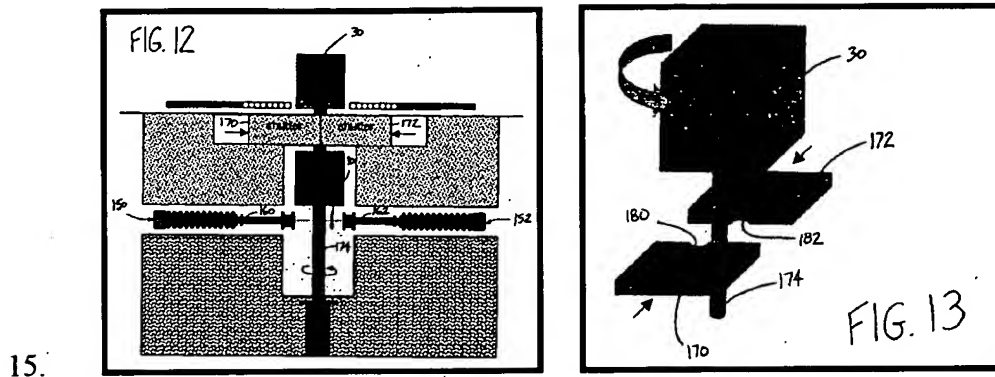


Fig. 4 (Left) - System for Irradiating Articles - U.S. Patent 6,931,095 to Koenck et al.;

Fig. 2 (Right) - X-ray Pallet Processing - U.S. Patent Application Publication 2005/0078789 to Miller (Instant Application 10/681,756)

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14. As per claims 1 and 18, Koenck et al. discloses a system comprising (and corresponding method of irradiating) comprising: a source of radiation not shown in Fig. 4 above; Examiner notes however, Fig. 4 is indicative of system configured to irradiate a pallet (30) with X-ray radiation (69- note X-ray converter 70)) having first and second states for directing radiation in a first plane toward the pallet in the first state and for not directing radiation toward the pallet in the second state; a holder (not shown above, see Figs. 12 and 13) having first and second states for moving the pallet (30) in a second plane substantially perpendicular to the first plane during the first state of the source and for preventing any movement of the pallet in the second state of the source and a motor (not shown above, see Figs. 12 and 13) having first and second states of operation for rotating the pallet on an axis substantially corresponding to the second plane during the second state of the source of radiation (see also column 7, lines 13-67; column 8, lines 1-41). Examiner notes, for purposes of discussion, that Koenck et al. do not explicitly disclose a control for energizing the source of radiation. However, those having ordinary skill in the art would appreciate the disclosure as being directed to a means for controlling radiation parameters of the system (see column 8, lines 37-41). Koenck et al. do not explicitly disclose a system wherein the motor rotates the pallet through a particular angle each time that the source of radiation and the holder are in the second state.



16. Koenck et al. teach the rotation of a pallet through a particular angle to irradiate the entire pallet (see Figs. 12 and 13, above). Koenck et al. suggest the rotation of the pallet when the source of radiation and holder are in a second state (column 7, lines 46-49; column 8, lines 2-7).

17. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Koenck et al. such that it incorporated a motor, wherein the motor rotates a pallet through a particular angle each time that the source of radiation and the holder are in the second state. One would have been motivated to make such a modification for the purpose of controlling radiation dosage applied to the pallet as suggested by Koenck et al. (column 7, lines 46-49; column 8, lines 2-7; see also column 8, lines 8-10).

18. As per claims 2 and 19, Koenck et al. as modified above, disclose a system wherein the source of radiation is X-rays (69).

19. As per claim 20, Koenck et al. as modified above, discloses a system wherein the pallet (30) is rotatable pallet on a particular axis and wherein the pallet is rotatable on the particular axis after the energizing of the pallet by the radiation source. (see Figs. 12 and 13, above; column 7, lines 46-49; column 8, lines 2-7; see also column 8, lines 8-10). For purposes of discussion, Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

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20. **As per claim 3**, Koenck et al. as modified above, does not explicitly disclose a system further comprising a magnetic lens assembly for converging radiation from the source to a particular position in the pallet during the first state of the source of radiation.

21. Koenck et al. teach the use of a compound-bending magnet for converging radiation from the source to a particular position in the pallet during the first state of the source of radiation (see Fig. 4, above).

22. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the system of Koenck et al. such that it incorporated a magnetic lens assembly. One would have been motivated to make such a modification for the purpose of converging radiation from the source to a particular position in the pallet during the first state of the source of radiation, as suggested by Koenck et al. (see Fig. 4, above). Examiner regards the compound-bending magnet of Koenck et al. as a functionally equivalent element to the claimed magnetic lens assembly, since the disclosed function of the compound-bending magnet of Koenck et al., is to converge radiation from the source to a particular position in the pallet during the first state of the source of radiation. Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

23. **As per claims 4-7**, Koenck et al. as modified in claim 3, discloses a system wherein the motor is operable to rotate a pallet on a particular axis during the second state of the source of radiation and the holder (see Figs. 12 and 13, above; column 7, lines 46-49; column 8, lines 2-7; see also column 8, lines 8-10); wherein the magnetic lens converges radiation from the source to a particular position on the pallet after each successive rotation of the pallet on the particular axis (see Figs. 4, 12 and 13); wherein a microcomputer controls radiation parameters (see column 4,



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lines 32-37). For purposes of discussion, Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

24. As per claims 9 and 32, Koenck et al. disclose a system (and corresponding method) comprising: a source of radiation producing radiation in a first direction- not shown in Fig. 4 above; Examiner notes however, Fig. 4 is indicative of system configured to irradiate a pallet (30) with X-ray radiation (69- note X-ray converter 70)). Koenck et al. do not explicitly disclose a system does not explicitly disclose a system further comprising a magnetic lens assembly for converging radiation from the source to a particular position in the pallet in a direction different from a first direction.

25. Koenck et al. teach the use of a compound-bending magnet for converging radiation from the source to a particular position in the pallet in a direction different from a first direction (see Fig. 4, above).

26. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the system of Koenck et al. such that it incorporated a magnetic lens assembly. One would have been motivated to make such a modification for the purpose of converging radiation from the source to a particular position in the pallet in a direction different from a first direction, as suggested by Koenck et al. (see Fig. 4, above). Examiner regards the compound-bending magnet (64) of Koenck et al. as a functionally equivalent element to the claimed magnetic lens assembly, since the disclosed function of the compound-bending magnet (64) of Koenck et al., is to converge radiation from the source to a particular position in the pallet in a direction different from a first direction. Examiner further

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notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

27. **As per claims 10-14, 16, 17 and 33-37**, Koenck et al., as modified in claim 9, discloses a system (and corresponding method of irradiating) wherein the magnetic lens focuses radiation at a center of a pallet (see Fig. 4 above); a converter (70) is provided to provide X-rays; the magnetic lens converges X-rays to the center of the pallet; wherein the radiation initially constitutes electron beamlets (52) and wherein the electron beamlets are converted to X-rays before the electron beamlets reach the pallet and wherein the magnetic lens irradiates approximately one eighth of a cross sectional area of the pallet(see Fig. 4, above). For purposes of discussion, Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

28. **As per claim 15**, Koenck et al., as modified in claim 9, discloses a system comprising a scan horn (50) but does not explicitly disclose a system comprising a dipole magnet.

29. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the system of Koenck et al. such that it incorporated a magnetic lens assembly comprising a scan horn (50) and a dipole magnet. One would have been motivated to make such a modification for the purpose of converging radiation from the source to a particular position in the pallet, as suggested by Koenck et al. (see Fig. 4, above). Examiner regards the combination scan horn (50) compound-bending magnet (64) of Koenck et al. as functionally equivalent elements to the claimed magnetic lens assembly, since the disclosed function of the combination scan horn (50) compound-bending magnet (64) of Koenck et al., is to converge radiation from the source to a particular position in the pallet in a direction different

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from a first direction. Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

30. As per claims 21 and 38-43, Koenck et al., disclose a system comprising: a source of radiation; a converter (70) and a scan horn (50) but does not explicitly disclose a system comprising a dipole magnet.

31. Koenck et al. teach the use of a compound-bending magnet for converging radiation from the source to a particular position in the pallet (see Fig. 4, above).

32. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the system of Koenck et al. such that it incorporated a scan horn (50) and a dipole magnet. One would have been motivated to make such a modification for the purpose of converging radiation from the source to a particular position in the pallet, as suggested by Koenck et al. (see Fig. 4, above). Examiner regards the combination scan horn (50) compound-bending magnet (64) of Koenck et al. as functionally equivalent elements to the claimed scan horn and dipole magnet, since the disclosed function of the combination scan horn (50) compound-bending magnet (64) of Koenck et al., is to converge radiation from the source to a particular position in the pallet. Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

33. As per claims 22-26, Koenck et al. as modified in claim 21, disclose a system wherein radiation is provided in a particular plane and a member is provided for rotating the pallet on an axis substantially perpendicular to the plane of radiation (column 7, lines 46-49; column 8, lines 2-7). For purposes of discussion, Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

34. As per claim 27, Koenck et al. disclose a system comprising a source of radiation and a first member for rotating a pallet. Koenck et al. do not explicitly disclose a system further comprising magnetic members constructed and disposed relative to one another or a control system for providing a radiation form the source to the pallet.

35. Koenck et al. teach the use of a compound-bending magnet for converging radiation from the source to a particular position in the pallet during the first state of the source of radiation (see Fig. 4, above). Additionally, Koenck et al. teach the rotation of a pallet through a particular angle to irradiate the entire pallet (see Figs. 12 and 13, above; see also column 7, lines 46-49; column 8, lines 2-7).

36. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the system of Koenck et al. such that it incorporated magnetic members constructed and disposed relative to one another and a control system for providing radiation from the source to the pallet. One would have been motivated to make such a modification for the purposes of a) controlling radiation dosage applied to the pallet as suggested by Koenck et al. (column 7, lines 46-49; column 8, lines 2-7; see also column 8, lines 8-10) and b) converging radiation from the source to a particular position in the pallet, as suggested by Koenck et al. (see Fig. 4, above). Examiner regards the compound-bending magnet of Koenck et al. as a functionally equivalent element to the claimed magnetic members constructed and disposed relative to one another, since the disclosed function of the compound-bending magnet of Koenck et al., is to converge radiation from the source to a particular position in the pallet during the first state of the source of radiation. Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

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37. **As per claims 28-31**, Koenck et al., as modified in claim 27, discloses a system wherein a converter (70) is provided to provide X-rays; wherein the focused position is at the center of the pallet; wherein the radiation initially constitutes electron beamlets (52) and wherein the electron beamlets are converted to X-rays before the electron beamlets reach the pallet. For purposes of discussion, Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

38. **As per claims 44-53**, Koenck et al. disclose a method of irradiating a pallet comprising the steps of providing radiation in a first direction, scanning radiation in a second direction, substantially perpendicular to a first direction and moving the pallet in a third direction substantially perpendicular to the first and second direction (Examiner notes that Fig. 4 can be viewed as a bird's eye view ... the first direction correlates with the beam axis (left to right in the Fig. 4); the second direction correlates with a scanning motion from top to bottom (relative the pallet in Fig. 4); the third direction relates to the movement of the pallet into and out of the page). For brevity, Examiner recognizes that Koenck et al. do not explicitly recite each and every step as recited in the aforementioned claims, however it is recognized that the disclosure provided by Koenck et al. would motivate one having ordinary skill in the art to modify the irradiation parameters to regulate the amount of dosage applied to a pallet. Additionally, Koenck et al. have provided an irradiation framework that emphasizes the focusing of radiation to the center of a pallet, which is synonymous with the subject matter being claimed in the instant application (see columns 7 and 8; see also Figs. 4, 12 and 13 above). Examiner further notes that Koenck et al. anticipate modifications to the disclosure by those skilled in the art (column 8, lines 37-41).

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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Courtney Thomas*

Courtney Thomas  
Examiner  
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